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09/741,632	12/19/2000	Brian Scott Cook	135774	5579

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EXAMINER

DENNISON, JERRY B

ART UNIT PAPER NUMBER

2143

DATE MAILED: 04/16/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,632

Applicant(s)

COOK ET AL.

Examiner

J. Bret Dennison

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in response to Application Number 09/741632 received on 19 December 2000.
2. Claims 1-20 are presented for examination.

Specification

3. The disclosure is objected to because of the following informalities:
STS-1, STS-3, and STS-48 acronyms lack definition. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6, 7, 11-13, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Thrysoe (U.S. Patent Number 6,574,238) hereinafter referred to by Thrysoe.

4. Regarding claims 1, 11, and 13, Thrysoe discloses a method of transparently transporting frame information across a network, comprising:

placing payload information from a first frame into payload locations of a second frame, the first frame associated with a first network having a first protocol, the second frame associated with a second network having a second protocol (Thrysoe, col. 35-50, Thrysoe teaches forming a modified frame from the payload of a received frame);

placing overhead information from the first frame into payload locations of a payload for the second frame (Thrysoe, col. 5, lines 58-63, Thrysoe teaches modifying frames to conform to the frame format by moving overhead information so that they precede the final CRC field,).

5. Regarding claim 2, Thrysoe teaches the limitations, substantially as claimed, as described in claim 1, including wherein the payload information of the first frame is mapped exactly into corresponding payload locations of the second frame (Thrysoe, col. 5, lines 48-50, Thrysoe teaches passing a consistent ISL frame format, which includes mapping payload information into corresponding payload locations.).

6. Regarding claims 3 and 12, Thrysoe teaches the limitations, substantially as claimed, as described in claims 1 and 11, including wherein the overhead information of the first frame is placed into fixed stuff locations of the payload of the second frame (Thrysoe, col. 5, lines 58-63, Thrysoe teaches modifying frames to conform to the frame format by extracting overhead information from the first frame and moving it so that it precedes the final CRC field in the second frame).

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7. Regarding claim 6, Thrysoe teaches the limitations, substantially as claimed, as described in claim 1, including wherein path overhead locations of the second frame include overhead information of the first frame (Thrysoe, col. 5, lines 58-63, Thrysoe teaches placing modified header information from the first frame into the header of the second frame).

8. Regarding claim 7, Thrysoe teaches the limitations, substantially as claimed, as described in claim 1, including sending the second frame across the second network (Thrysoe, col. 1, lines 35-40, Thrysoe discloses an inter-switch link which is used to connect networks, see Fig. 1).

9. Regarding claim 15, Thrysoe teaches the limitations, substantially as claimed, as described in claim 11, including wherein the node is operable to place an entire header and payload portions of the first frame structure into the payload portion of the second frame structure (Thrysoe, col. 5, line 45 through col. 6, line 10, Thrysoe teaches modifying the header data and placing it along with the payload portions into the payload portion of the new frame).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thrysoe in view of Upp et al. (U.S. Patent Number 4,967,405) hereinafter referred to by Upp.

10. Regarding claims 4, 5 and 14, Thrysoe teaches the limitations, substantially as claimed, as described in claims 1 and 11, including wherein a consistent frame format is used by modifying overhead bytes. However, Thrysoe does not explicitly state wherein redundant overhead bytes are discarded. In an analogous art of processing signals in SONET format, Upp discloses zeroing out the overhead bytes (Upp, col. 3, lines 60-67).

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe with Upp to provide a system that transports a variety of native frame types including SONET format for the benefit of providing cross connection of high-rate digital carrier signals with other high-rate digital signal carriers (Upp, col. 2, lines 19-25).

Claims 8-10, 16, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thrysoe in view of Parruck et al. (U.S. Patent Number 5,257,261) hereinafter referred to by Parruck.

11. Regarding claim 8, Thrysoe teaches the limitations, substantially as claimed, as described in claim 7, except receiving the second frame at a departure node of the second network;

extracting payload information for the second frame from the second frame;

extracting overhead information for the first frame;

reconstructing the first frame in the departure node from the extracted payload and overhead information.

In an analogous art of processing signals in SONET format, Parruck discloses receiving a frame signal (Parruck, col. 5, lines 35-40), extracting payload information from the frame (Parruck, col. 6, lines 8-15), extracting overhead information (Parruck, col. 6, lines 40-45), and reconstructing the frame from the extracted payload and overhead information (Parruck, col. 6, lines 15-20, lines 37-45).

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe with Parruck to provide transmission of signals between networks by recombination of higher level signals after they have been broken into a plurality of constituent components (Parruck, col. 1, lines 55-67).

12. Regarding claims 9 and 10, Thrysoe and Parruck teach the limitations, substantially as claimed, as described in claim 8, including transferring the first frame to a third remote network, the third network having the first protocol (Thrysoe, col. 1, lines 35-40, Thrysoe discloses an inter-switch link which is used to connect networks to transfer data, see Fig. 1). Therefore it would have been obvious to one in the ordinary

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skill in the art at the time of the invention to combine Thrysoe with Parruck to provide transmission of signals between networks by recombination of higher level signals after they have been broken into a plurality of constituent components (Parruck, col. 1, lines 55-67).

13. Regarding claims 16 and 20, Thrysoe discloses a method of transparently transporting frame information across a network, comprising:

placing payload information from a first frame into payload locations of a second frame, the first frame associated with a first network having a first protocol, the second frame associated with a second network having a second protocol (Thrysoe, col. 35-50, Thrysoe teaches forming a modified frame from the payload of a received frame);

placing overhead information from the first frame into payload locations of a payload for the second frame (Thrysoe, col. 5, lines 58-63, Thrysoe teaches modifying frames to conform to the frame format by moving overhead information so that they precede the final CRC field,).

However, Thrysoe does not disclose receiving a first STS-3 telecommunications signal carrying three STS-1 telecommunications signals, each including header and payload information.

In an analogous art, Parruck discloses the concatenation of STS-1 signals to form an STS-3 signal (Parruck, col. 3, lines 15-25)

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe with Parruck to provide transmission of signals

between networks by recombination of higher level signals after they have been broken into a plurality of constituent components (Parruck, col. 1, lines 55-67).

14. Regarding claim 17, Thrysoe and Parruck teach the limitations, substantially as claimed, as described in claim 16, including wherein the path overhead locations of the second frame structure includes path overhead for the second STS-3 telecommunications signal, path overhead for the first STS-3 telecommunications signal, and overhead bytes from the header portion of the first frame structure. (Thrysoe, col. 5, lines 58-63, Thrysoe teaches modifying frames to conform to the frame format by extracting overhead information from the first frame and moving it so that it precedes the final CRC field in the second frame).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thrysoe and Parruck as applied to claim 16 above, and further in view of Upp et al. (U.S. Patent Number 4,967,405) hereinafter referred to by Upp.

15. Regarding claim 18, Thrysoe and Parruck teach the limitations, substantially as claimed, as described in claim 16, including wherein a consistent frame format is used by modifying overhead bytes. However, Thrysoe and Parruck do not explicitly state discarding overhead bytes of the header portion of the first frame structure that are redundant between the three STS-1 telecommunications signals and that are identical with overhead bytes for the second STS-3 telecommunications signal. In an analogous

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art of processing signals in SONET format, Upp discloses zeroing out the overhead bytes (Upp, col. 3, lines 60-67).

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe and Parruck with Upp to provide a system that transports a variety of native frame types including SONET format for the benefit of providing cross connection of high-rate digital carrier signals with other high-rate digital signal carriers (Upp, col. 2, lines 19-25).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thrysoe in view of Parruck as applied to claim 16 above, and further in view of Fedders et al. (U.S. Patent Number 6,603,776).

16. Regarding claim 19, Thrysoe and Parruck teach the limitations, substantially as claimed, as described in claim 16. However, Thrysoe and Parruck do not explicitly state wherein the fixed stuff byte locations are in columns 30 and 59 of the second frame structure. In an analogous art, Fedders discloses a system for efficient broadband data payload conversion wherein the stuff bytes are written into columns 30 and 59 (Fedders, col. 5, lines 10-16). Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe and Parruck with Fedders to efficiently convert broadband data between two sets of data formats (Fedders, col. 1, lines 14-15)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is (703)305-8756. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703)308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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